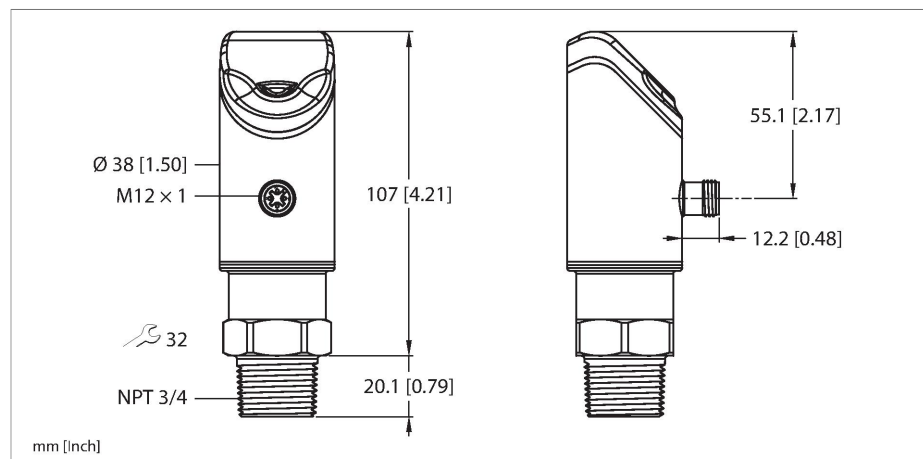


# LUS211-40-34-2UPN8-H1141

## Ultrasonic Sensor – Level Control



### Technical data

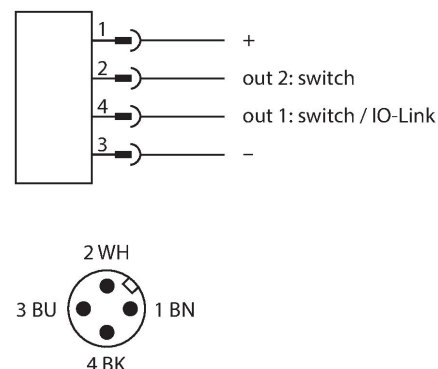
|                                      |                                  |
|--------------------------------------|----------------------------------|
| Type                                 | LUS211-40-34-2UPN8-H1141         |
| ID no.                               | 100003164                        |
| <b>Ultrasonic data</b>               |                                  |
| Function                             | Proximity                        |
| Range                                | 5...400 mm                       |
| Resolution                           | 0.5 mm                           |
| Minimum measuring range              | 50 mm                            |
| Minimum switching range              | 5 mm                             |
| Ultrasound frequency                 | 320 kHz                          |
| Temperature drift                    | ± 1.5 % of full scale            |
| Edge lengths of the nominal actuator | 20 mm                            |
| Approach speed                       | ≤ 3 m/s                          |
| Pass speed                           | ≤ 1.3 m/s                        |
| <b>Electrical data</b>               |                                  |
| Operating voltage                    | 18...33 VDC                      |
| No-load current                      | ≤ 150 mA                         |
| Load resistance                      | ≤ 1000 Ω                         |
| Residual current                     | ≤ 0.1 mA                         |
| Response time typical                | < 60 ms                          |
| Readiness delay                      | ≤ 300 ms                         |
| Communication protocol               | IO-Link                          |
| Output function                      | NO/NC, PNP                       |
| Output 1                             | Switching output or IO-Link mode |



### Features

- 4-digit, two-colored, 14-segment display, rotatable by 180°
- Housing is rotatable after plugging the process connection
- 3/4" NPT process connection
- Blind zone: 0.5 cm
- Range: 40 cm
- Resolution: 0.5 mm
- Cone angle of sonic cone: 15°
- 2 × switching outputs, PNP/NPN
- NO/NC programmable
- Transmission of process value and parametrization via IO-Link

### Wiring diagram



### Functional principle

Ultrasonic sensors capture a multitude of objects contactlessly and wear-free with ultrasonic waves. It does not matter whether

## Technical data

|                                |                              |
|--------------------------------|------------------------------|
| Output 2                       | Switching output             |
| Switching frequency            | ≤ 5 Hz                       |
| Hysteresis                     | ≤ 5 mm                       |
| Voltage drop at I <sub>a</sub> | ≤ 2.5 V                      |
| Short-circuit protection       | yes                          |
| Reverse polarity protection    | yes                          |
| Setting option                 | Capacitive Sensor<br>IO-Link |

| IO-Link                    |                     |
|----------------------------|---------------------|
| IO-Link specification      | V 1.1               |
| IO-Link port type          | Class A             |
| Communication mode         | COM 2 (38.4 kBaud)  |
| Process data width         | 32 bit              |
| Measured value information | 15 bit              |
| Switchpoint information    | 4 bit               |
| Frame type                 | 2.2                 |
| Minimum cycle time         | 5 ms                |
| Function Pin 4             | IO-Link             |
| Function Pin 2             | DI                  |
| Maximum cable length       | 20 m                |
| Profile support            | Smart Sensor Profil |
| Included in the SIDI GSDML | Yes                 |

| Mechanical data       |                                                                 |
|-----------------------|-----------------------------------------------------------------|
| Design                | Smooth barrel, LUS                                              |
| Radiation direction   | straight                                                        |
| Dimensions            | Ø 38 x 127.1 mm                                                 |
| Housing material      | Stainless-steel/Plastic, 1.4404 (AISI 316L)/Grilamid TR90 UV PA |
| Transducer material   | Plastic, Epoxyd resin and PU foam                               |
| Electrical connection | Connector, M12 × 1, 4-wire                                      |
| Process connection    | 3/4" NPT                                                        |
| Ambient temperature   | -25...+70 °C                                                    |
| Protection class      | IP67<br>IP69K                                                   |
|                       | Not assessed by UL                                              |

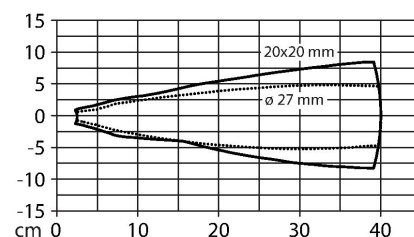
| Tests/approvals                      |              |
|--------------------------------------|--------------|
| Declaration of conformity EN ISO/IEC | EN 60947-5-2 |

the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

The sonic cone diagram indicates the detection range of the sensor. In accordance with standard EN 60947-5-2, quadratic targets in a range of sizes (20 × 20 mm, 100 × 100 mm) and a round rod with a diameter of 27 mm are used.

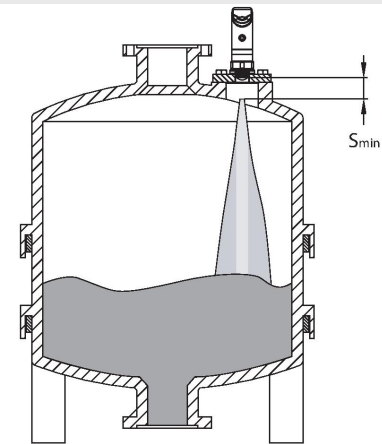
Important: The detection ranges for other targets may differ from those for standard targets due to the different reflection properties and geometries.

## Sonic Cone



Mounting instructions

Mounting instructions/Description



Accessories

Wiring accessories

| Dimension drawing | Type                  | ID no.  |                                                                                                                                                                                                                       |
|-------------------|-----------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | RKC4.4T-2/TEL         | 6625013 | Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>      |
|                   | WKC4.4T-2/TEL         | 6625025 | Connection cable, female M12, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>        |
|                   | RKC4.4T-2-RSC4.4T/TEL | 6625208 | Connection cable, M12 female plug, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a> |

Accessories

LUS211-40-34-2UPN8-H114 1| 07/21/2021 11-43 | technical changes reserved